



*BC Timber Sales
Kootenay Business Area*

FOREST STEWARDSHIP PLAN #601

2017 to 2022

This Forest Stewardship Plan is applicable to
BC Timber Sales' planning, operations, licences and permits within:

Rocky Mountain Natural Resource District and
Selkirk Natural Resource District

AMENDMENT #5 **COMPENDIUM OF CHANGES**

VERSION: SEPTEMBER 30, 2020

BC Timber Sales
Kootenay Business Area
1907 Ridgewood Road
Nelson, B.C.
V1L 6K1

BCTS Forest Stewardship Plan (FSP) #601 Amendment #5 - Compendium of Changes

This compendium contains proposed changes for an amendment to the 2017 to 2022 BC Timber Sales (BCTS) Forest Stewardship Plan (FSP) #601, put into effect by the Delegated Decision Maker (DDM) for the Minister of Forests, Lands and Natural Resource Operations on May 12, 2017.

FSP sections with proposed changes are included in their entirety, with revisions shown in red and purple text. For FSP sections with no proposed changes, only section headings are shown for reference and formatting purposes.

The changes proposed in this compendium will be incorporated into a fully consolidated FSP document which, if approved by the DDM, will constitute Amendment #5 to the FSP.

Summary of Changes

Text Colour Coding:	
<ul style="list-style-type: none"> ➤ Black: Original Forest Stewardship Plan wording - approved May 12, 2017 ➤ Red: Amendment #5 - proposed changes, advertised and referred January 2, 2020 ➤ Purple: Amendment #5 - revisions following the public review and comment period, after March 2, 2020 	
FSP Section	Description of Proposed Change(s)
5.1 Soils	Revisions to clarify the circumstances and application of a prohibition on the construction of newly proposed excavated or bladed trails or roads where soil conservation may be at risk, slopes are greater than 60%, or where FRPA or other values are potentially at risk, as determined by a qualified professional. Detail added in definition of a 'plan' and new definitions of 'soil conservation' and an 'evaluation' to determine if a site review and terrain stability assessment are indicated.
5.3.1.5 Water, Fish, Wildlife and Biodiversity within Riparian Areas	New Strategy #2f. Requires that agreement holders remove introduced slash and debris, resulting from timber harvesting and landing activities, from all stream channels. Added requirements related to designated stream crossing trails.
5.3.1.7 Wildlife and Biodiversity — Stand Level	New Result #3 to specify the limited conditions under which an agreement holder may alter or relocate a WTRA. Result #4e: New wording to permit salvage of mature spruce or Douglas-fir windthrown trees within a WTRA or WTA which may be a source for epidemic insect spread. New footnote to clearly define these situations. Susceptibility criteria updated. Result #5b: Correction of typographical error referencing an incorrect section. Added requirement to prepare a rationale for harvesting within a WTRA or WTP.
5.3.1.8 Wildlife and Biodiversity — Coarse Woody Debris	New Section. Requires that agreement holders retain specific sizes of coarse woody debris within BEC zones where analyses indicate lower retention levels achieved. New Strategy (#2) added to reduce the potential for buildup of Douglas-fir and spruce bark beetles.
5.3.2.4 Species at Risk, Regionally Important Wildlife, Ungulate Winter Range and Wildlife Habitat Areas	References to 'wildlife habitat features' added as an element considered in planning, awareness training and information provided to contractors and agreement holders.
5.3.2.5 Encounters with Wildlife Habitat Features	New Section. Strategies to prevent damaging or rendering ineffective wildlife habitat features, both known or newly discovered. Revision to list of wildlife habitat features. Cross reference added to link Section 5.3.2.4 related to wildlife habitat features.
5.4.1 Water in Community Watersheds	Addition to Strategy #2 to provide an exception to the requirement for a hydrological assessment in situations where the proposed forest development within a community watershed is a very minor incursion, incidental in nature and unlikely to have negative hydrological effects.

	New strategy (#5) to affirm that the results and strategies of Sections 5.8.1 (Road Maintenance), 5.8.2 (Road Deactivation) and 5.8.3 (Revegetation Following Road Construction and Deactivation) are requirements within community watersheds. Detail added regarding the definition, circumstances and application of Strategy #2 related to 'incidental' forest development in a community watershed.
5.4.2 Consumptive Use Streams	Revision to affirm that the results and strategies of Sections 5.8.1 (Road Maintenance), 5.8.2 (Road Deactivation) and 5.8.3 (Revegetation Following Road Construction and Deactivation) apply in areas with consumptive use streams, replacing the more limited strategy regarding revegetation only, to improve consistency.
5.5 Visual Quality - Scenic Areas and Visual Quality Objectives	Detail added to strategies in situations where it is not practicable to achieve an established VQO, consistent with FPPR Section 25.1. Reference to Section 12(7) of the FPPR removed, leaving Section 25.1 as the more applicable section.
5.8.2 Road Deactivation	New Section. Specifies requirements for agreement holders carrying out road deactivation regarding preparation of a Road Deactivation Plan and the requirements of a professional. Provides a definition of road deactivation.
5.8.3 Revegetation following Road Construction and Deactivation	Clarification that all areas of new mineral soil exposure related to road construction and deactivation (i.e., new roads, new landings, or any areas deactivated or rehabilitated) must be grass seeded, unless the areas will be revegetated through the planting of trees and the areas are not a high erosion hazard. Addition to require a certificate of analysis for grass seed to confirm that invasive plant seeds are not present in seed mixes.
6.1 Measures to Prevent the Introduction or Spread of Invasive Plants	Measure #3 is revised to clarify that: <ul style="list-style-type: none"> ○ requirements also apply to areas where new invasive plant infestations have been identified by personnel in the field (new); ○ requirements apply where silviculture mechanical site preparation is conducted; and ○ all areas of new mineral soil exposure (new roads, new landings, or any areas deactivated or rehabilitated (including roads, trails, or landings)) must be grass seeded, unless the areas will be revegetated through the planting of trees and the areas are not a high erosion hazard. Additions to Measure #3 to specify a seed application rate and to require a certificate of analysis for grass seed to confirm that invasive plant seeds are not present in seed mixes.
6.2 Measures to Mitigate the Loss of Natural Range Barriers	Addition of 2 elements for the TSM to provide information to, and request information from, Range Tenure Holders regarding natural range barriers.
Minor Updates and Corrected Typographical Errors (not included in this Compendium)	
Document Control	Document Control page added to the front of the FSP document to identify and track amendments put into effect after the May 12, 2017 approval of the 2017-2022 BCTS FSP.
General: Various Internet / Website Links	Broken website and internet document links updated / corrected.
Acronym / Name Updates	Updates where acronyms and names have changed (e.g., MFLNRO vs. MFLNRORD, etc.).
APPENDIX 4 - Designated Community Watersheds in Effect	Typographical errors corrected to remove duplicated Community Watershed names.
APPENDIX 6 - FSP Amendments	New Appendix to include copies of FSP amendments #1 to #4 put into effect after the May 12, 2017 approval of the 2017-2022 BCTS FSP.

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1. SIGNATURES

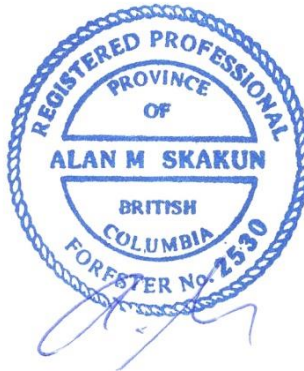
Signature of the Person Required to Prepare this FSP:



George Edney, RPF
Acting Timber Sales Manager
Kootenay Business Area

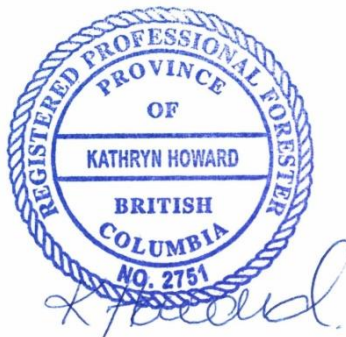
Date: September 30, 2020

Signature and Seal of Preparing Registered Professional Foresters:



Alan M. Skakun, RPF #2530

Date: September 30, 2020



Kathryn A. Howard, RPF #2751

Date: September 30, 2020

"I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to the standards expected of a member of the Association of British Columbia Forest Professionals."

2. INTERPRETATION

2.1. Definitions under Acts and Regulations

(No change)

2.2. Definitions Specific to this FSP

(No change)

2.3. Objectives, Results, Strategies and Measures

(No change)

2.4. Common Acronyms Used in this FSP

(Minor changes)

3. REFERENCES

(No change)

4. APPLICATION OF THE FSP

4.1. Term of the FSP

(No change)

4.2. FSP Holder - Timber Sales Manager

(No change)

4.3. Purpose of the FSP and Initiatives outside the FSP

(No change)

4.3.1 Government Objectives and Public Review

(No change)

4.3.2 BCTS Operating Plans and Public Engagement

(No change)

4.3.3 Other Initiatives

(No change)

4.4. Application of the FSP

(No change)

4.5. Forest Development Units (FDUs) & Rationale

(No change)

4.5.1 Collaboration within Shared Management Units

(No change)

4.6. Timber Sale Licences and Road Permits in Effect

(No change)

5. RESULTS AND STRATEGIES IN RELATION TO FOREST RESOURCE VALUES

5.1. **Soils

Legal References: FPPR Sec. 5, Sec. 12.1 (5), Sec. 35, and Sec. 36

Results and Strategies
<p>1. For the objective for soils that is set out in Section 5 of the FPPR, the TSM adopts, as a result or strategy, Sections 35 (<i>soil disturbance limits</i>) and 36 (<i>permanent access structure limits</i>) of the FPPR. Prior to the start of timber harvesting or road construction, through a site plan, support document or pre-work document, the TSM will notify each holder of a timber sale licence entered into or a road permit granted during the term of the plan that FPPR Sections 35 and 36 apply to the holder <i>and the following additional strategies shall apply to each holder of an agreement under Section 12(2) of the Forest Act entered into by the TSM:</i></p> <p>2. In addition to the above requirements, As a strategy, <i>and subject to Strategies #3 and #4 below, the TSM will prohibit</i> the construction of bladed and excavated <i>or bladed</i> trails or roads that were not previously identified in a plan¹ at the time of entering into of an agreement is prohibited within the portions of <i>in a Standards Unit (SU) of a cutblock where any of the following circumstances exist:</i></p> <p class="list-item-l1">a. <i>a Qualified Professional has determined that soil conservation² is at risk if excavated or bladed trails or roads are constructed;</i></p> <p class="list-item-l1">b. slopes within the SU exceed 60%; and unless a Qualified Professional has determined that soil conservation is not at risk if bladed or excavated trails are constructed;</p> <p class="list-item-l1">c. <i>a site review and corresponding documentation by a Qualified Professional indicate that the risk to one or more FRPA values or another high value element³ is sufficient to warrant the requirement of applying this strategy this prohibition.</i></p> <p>3. As a strategy, where the TSM prescribes a specific a bladed or excavated back spar trail or forwarding trail or road is prescribed within a SU where on slopes exceeding 60%, a</p>

~~Qualified Professional will conduct a site review or terrain stability assessment with corresponding documentation.~~

3. As a strategy, where an excavated or bladed trail or road is planned to be constructed by an agreement holder in the circumstances identified in 2b or 2c of Strategy #2, prior to timber harvesting or trail or road construction, a Qualified Professional will:
 - a. conduct an evaluation⁴ that includes a preliminary consequence rating and assessment of factors to determine if a site review⁵ and terrain stability assessment are indicated; and
 - b. ensure any indicated site review, terrain stability assessment and/or other related assessments are completed to address factors of terrain stability and potential risks to any identified FRPA values or other high value elements.
- ~~4. As a strategy, prior to the TSM constructing a road or entering into an agreement that authorizes timber harvesting or road construction, the results of any determination, site review or a terrain stability assessment, and the corresponding decisions made, related to strategies #2 and #3 will be documented by the TSM in a Site Plan or Support Document.~~
4. As a strategy, prior to timber harvesting or trail or road construction related to Strategies #2 and #3, a Qualified Professional will:
 - a. document the results of any ~~determination~~ evaluation, site review, ~~or~~ terrain stability assessment, or other related assessments and the corresponding changes to the original plan ~~including will be documented by a Qualified Professional in a written notification to the TSM, in a format acceptable to the TSM;~~ in an amended plan or addendum document;
 - b. provide a ~~written notification to the TSM, in a format acceptable to the TSM;~~ and
 - c. ensure that trail and road construction activities, and deactivation/rehabilitation measures if applicable, are conducted in adherence to the amended plan or addendum document.

¹ For the purposes of this section, a 'plan' means a site plan, support document, harvest plan or a professional assessment related to terrain stability or soil erosion. 'Identified in a plan' means shown by a specific location or permitted area coded on a plan map or by text description of location or circumstance(s) in a plan document.

² For the purposes of this section, 'soil conservation' means the prevention of soil degradation (including compaction, puddling, displacement, surface erosion and/or mass wasting) caused by soil disturbance, as determined from a hazard assessment evaluating site sensitivity to soil degrading processes.

³ For the purposes of this section, 'another high value element' includes a human high-use area or transportation corridor, major utility corridor, consumptive use water source, immediate or downstream high value fish habitat, or other value as determined by a Qualified Professional.

⁴ An 'evaluation', as described in Strategy #2, will utilize the BCTS 'Terrain Stability Assessments Decision & Documentation Tool' and related procedures as identified within the BCTS 'Terrain Stability Management Model Practices Document', both as amended from time to time.

⁵ For the purposes of this section, a 'site review' means a preliminary office and/or field review by a Qualified Professional to determine if further investigation or a terrain stability assessment is required. The

processes for site reviews and terrain stability assessments are as detailed within the BCTS 'Terrain Stability Management Model Practices Document', as amended from time to time.

5.2. Timber

5.2.1 Timber

(No change)

5.2.2 Enhanced Resource Development Zones - Timber

(No change)

5.3. Biodiversity, Wildlife and Fish

5.3.1 Biodiversity

5.3.1.1 Biodiversity Emphasis

(No change)

5.3.1.2 Old and Mature Forest

(No change)

5.3.1.3 Green-up

(No change)

5.3.1.4 Fire Maintained Ecosystems

(No change)

5.3.1.5 **Water, Fish, Wildlife and Biodiversity within Riparian Areas

Legal References: FPPR Sec. 8, Sec. 12.1(6), and Sec. 12(3)

Relates to: FSP Sec. 5.3.1.7

Information
<p><i>With regard to FPPR Section 12(3) - retention of trees in a riparian management zone (RMZ) - and the strategies below, the following is provided as guidance to prescribing QRPs:</i></p> <ol style="list-style-type: none"><i>For streams, wetlands or lakes that have a Riparian Reserve Zone (RRZ), the principal management objective of the RMZ will be to maintain the integrity of the RRZ, especially reducing windthrow hazard in the RRZ. A secondary objective will be to protect important wildlife and biodiversity values in the RMZ.</i><i>For streams, wetlands or lakes with a RMZ and no RRZ, the principal management objective of the RMZ will be to protect important values of water quality, wildlife habitat, fish habitat and stream bank and channel stability.</i>

Results and Strategies

1. *For the objective for Water, Fish, Wildlife and Biodiversity within Riparian Areas that is set out in Section 8 of the FPPR, the TSM will comply with Sections 47 to 49 (riparian classes), 50, 51, and 52(2) (restrictions in riparian areas) and 53¹ (temperature sensitive streams) of the FPPR. Through a site plan, support document or pre-work document, the TSM will notify each holder of a timber sale licence or road permit to which the plan relates that the above sections of the FPPR apply to the holder's primary forest activities carried out during the term of the plan.*
2. *With respect to FPPR Section 12(3) - retention of trees in a riparian management zone (RMZ), as defined in FPPR Sections 47 to 49, - the TSM specifies the following strategies (#2a and #2c to #2i) and result (#2b):*
 - a. *At the planning stage for timber harvesting, prior to the TSM entering into an agreement that authorizes timber harvesting, a QRP will conduct and document an assessment of the RMZs of streams, wetlands and lakes within or adjacent to planned cutblocks and establish site-specific tree retention specifications by assessing the following factors, including making recommendations to prevent or mitigate unavoidable adverse impacts to the RRZ, if present, and to stream channels:*
 - *safety issues*
 - *windthrow risk, based on tree, stand, soil and topographic characteristics, prevailing winds and options available to reduce risk*
 - *stream channel integrity, stream bank stability and ~~erosion~~ potential for erosion and sediment delivery to streams*
 - *forest health factors*
 - *fish and wildlife habitat*
 - *water quality*
 - *licensed consumptive water use and intake locations*
 - *presence of standing live or dead trees with wildlife habitat value*
 - *retention of understory vegetation and non-merchantable trees*
 - *shade requirements for streams*
 - *vegetation management and post-harvest silviculture treatments*
 - *coarse woody debris requirements*
 - *hydrological and terrain stability concerns and/or recommendations from related assessments*
 - *visual quality*
 - *range use*
 - *timber objectives and operational constraints*
 - *results, when available, from BCTS-Kootenay's monitoring program described in Strategy 2c below, as well as from relevant Forest & Range Evaluation Program (FREP) monitoring data gathered from BCTS TSLs in the Kootenay Business Area, to be referenced in a Site Plan or Support Document*
 - b. *At the completion of harvesting, tree retention levels in RMZs within a cutblock, as prescribed by a QRP in a Site Plan or Support Document, will:*

- i. be as specified in the table below and retain some area, individual trees or groups of trees in every RMZ unless, based on the factors assessed in 2a with a rationale documented in a Site Plan or Support Document, the QRP prescribes a different retention level;

Riparian Class	% of the Pre-Harvest Stems Per Hectare to be Retained
S1-A stream	20-100%
S1-B stream	10-100%
S2 stream	10-100%
S3 stream	10-100%
S4 stream	10-100%
S5 stream	10-100%
S6 stream	>0-100%
All classes of wetlands or lakes	10-100%

- ii. where trees are retained, be either regularly distributed or irregularly distributed as single trees or groups of trees; and
- iii. where trees are retained, include the number, distribution, species, size(s) and characteristics as specified by the QRP.
- c. To monitor the effectiveness of prescribed tree retention levels within RMZs and provide information to prescribing QRPs, the TSM will, twice within the term of the FSP, conduct and prepare a summary of the results from assessments of forest development impacts to stream function², related to the level of tree retention within RMZs, from a sample² of S4, S5 and S6 streams where adjacent timber harvesting has been completed for at least two years.
- d. In situations where tree retention occurs in part or all of a RMZ, and where the trees or area are considered by a QRP to be suitable based on the factors assessed in 2a above, the trees or area in the RMZ may contribute to stand level wildlife tree retention targets (WTRAs), and/or also contribute to old and mature-plus-old retention requirements for biodiversity at the landscape level. These decisions will be documented in a Site Plan or Support Document.
- e. In conducting timber harvesting, the direction of falling and yarding/skidding will be away from streams, wetlands and lakes, or parallel to streams, unless a safety hazard dictates otherwise or it is not practicable. For streams, where falling and yarding/skidding away is not practicable, directional bridging will be utilized prior to cross-stream yarding. ~~and introduced slash and debris will be removed from the wetted perimeter of the stream concurrent with harvesting.~~
- f. To protect the values of water quality, wildlife habitat, fish habitat and stream bank and channel stability, introduced slash and debris will be removed from all stream channels concurrent with harvesting³.
- g. To maintain stream bank and stream channel integrity on all streams that do not have a riparian reserve zone a minimum 5 metre machine-free zone will be

established along both sides of streams within harvest areas where ground-based equipment will operate, with the exception of designated / stream-crossing trails⁴.

- h. Where designated stream crossing trails are prescribed, these will be temporarily installed to facilitate the environmentally safe⁴ transport of logs or trees across stream channels and removed as soon as their use is no longer required.*
- i. As a strategy that applies to the TSM and each holder of an agreement under Section 12(2) of the Forest Act entered into by the TSM, primary forest activities will minimize new coarse woody debris and sediment inputs into streams to the extent practicable.*

¹ For information, with regard to FPPR Section 53, there are no temperature sensitive streams designated within any of the FDUs of this FSP as of the submission date of the FSP.

² Assessments of forest development impacts to stream function and sample population selection criteria will follow the relevant sections of the most current Forest & Range Evaluation Program (FREP) 'Protocol for Evaluating the Condition of Streams and Riparian Management Areas' and associated field procedures.

³ The following are the requirements for removing introduced slash and debris from all stream channels:

- Remove all introduced debris (tree stems, branches, and other woody debris) greater than 1 metre in length, and shorter lengths if accumulated together, from stream channels. 'Stream channel' means the maximum wetted perimeter or area between the stream banks, whichever is greater.
- In addition to the above debris, remove all introduced segments of tree stems/logs, or log ends of any length resulting from landing and timber processing activities, from stream channels.
- Conduct ~~stream channel clean-out~~ removal of harvesting debris concurrent with logging. 'Concurrent' means prior to spring freshet or demobilization of skidding/yarding equipment, whichever is earlier.
- Place removed debris where it will not re-enter the stream as a result of downslope movement or stream peak flows.
- Do not remove pre-harvest embedded or natural ~~large~~ woody debris.
- ~~Hand clean to remove fine debris and do not use heavy machinery where stream banks or natural large woody debris will be disturbed.~~ Do not use heavy machinery to remove fine harvest debris in areas where stream banks, natural woody debris or riparian vegetation will be disturbed.

⁴ With reference to designated stream crossing trails and 'environmentally safe' transport of logs or trees described in this section, such designated crossings will incorporate the following, as practicable:

- crossing perpendicular to the stream channel and at a location having the narrowest width, a straight section (not meandering or braided) and with solid, stable stream banks, bed and approaches;
- use of structures and/or materials that will not obstruct stream flow (if present) and placement techniques (e.g., lifting into place) that will avoid destabilizing stream banks or channel bed;
- installation of sediment and erosion control measures, as appropriate, before starting work;
- avoiding or minimizing exposed channel crossings by equipment (e.g., one time, tracked machine only); and
- deactivation practices that maintain stream bank stability, avoid channel, bank and adjacent soil disturbance, re-stabilize exposed soils, re-establish natural drainage, and remove introduced debris and foreign materials.

5.3.1.6 Wildlife and Biodiversity — Landscape Level

(No change)

5.3.1.7 **Wildlife and Biodiversity — Stand Level

Legal References: FPPR Sec. 9.1, Sec. 12.5 (3), Sec. 12.5 (4), Sec. 66, and Sec. 67

Results and Strategies
<p><i>In accordance with FPPR Sections 12.5(3) and 12.5(4), for the objective for wildlife and biodiversity at the stand level that is set out in Section 9.1 of the FPPR the TSM specifies the following as alternate results and strategies for Sections 66 (wildlife tree retention) and 67 (restriction on harvesting wildlife trees) of the FPPR:</i></p> <ol style="list-style-type: none"><i>1. As a strategy, at the planning stage for timber harvesting and prior to the TSM entering into an agreement that authorizes timber harvesting, a QRP will establish Wildlife Tree Retention Areas (WTRAs), considering the 'Attributes of High-Value Wildlife Tree Retention Strategies' in Appendix 3. The QRP will identify and map the WTRA areas, as well as document the attributes identified, in a Site Plan or Support Document.</i><i>2. As a result, at the completion of harvesting of a TSL by an agreement holder, an area equivalent to a minimum of 7% of total cutblock area will be retained in WTRAs, and the following additional strategies are specified:</i><ol style="list-style-type: none"><i>a. the minimum area in WTRA(s) will be calculated at the TSL level;</i><i>b. a WTRA may relate to one or more cutblocks of the TSL;</i><i>c. areas of individual trees and clumps or patches (disbursed retention) which are less than 0.25 ha in size can be used to contribute to the required WTRA percentage on the basis of the total basal area of the trees retained divided by the average basal area of the associated forest type;</i><i>d. some area, individual trees, clump(s) or patch(es) will be retained in every cutblock to contribute towards the WTRA requirement and the minimum area retained in any individual cutblock will be 3.5% of the total cutblock area; and</i><i>e. subject to Strategy 3 #4 below, WTRAs will be retained at least until trees in the net area to be reforested (NAR) have developed attributes that are consistent with a mature seral condition.</i><i>3. As a strategy, following the entering into of an agreement that authorizes timber harvesting by the TSM, the boundary and location of a WTRA identified through Strategy #1 and the results and strategies in Section #2 will not be altered by an agreement holder unless:</i><ol style="list-style-type: none"><i>a. the TSM provides confirmation in writing that the original WTRA boundary and/or location are not required to protect or manage a FRPA value, accommodate a stakeholder commitment or for another resource management purpose; and</i><i>b. the agreement holder ensures that a QRP documents, in a professional field-based assessment, how the altered boundary and/or new location of the WTRA complies with all of the requirements of Strategy #1 and the results and strategies of Section #2.</i>

4. As a result, timber within a WTRA or Wildlife Tree Patch (WTP) will not be harvested, except for one or more of the following reasons and subject to Strategy 4 #5 below:
- to facilitate harvesting of a cutblock - for tail holds, guy line tiebacks, designated skid trails or yarding corridors;
 - to address safety hazards;
 - where timber is damaged as a result of wind, fire or forest health factors and, in the opinion of a QRP, the WTRA or WTP is rendered ineffective¹;
 - where timber is highly susceptible² to insect damage; ~~and/or~~
 - where windthrown trees are a potential source to cause epidemic insect spread⁴; and/or
 - to facilitate road construction or address operational constraints to cable yarding, where there is no other practicable option, or where another option would result in greater risk to one or more FRPA Values.
5. As a strategy, where timber is harvested in a WTRA or WTP, and:
- the harvest area is mappable (greater than 0.25 hectares); and
 - the total area that remains in WTRAs following harvest is less than the % required in Section 1 #2 above or is less than the % required by a former FSP that applied to the WTRA or is less than the % required in WTPs as prescribed in a Site Plan or Silviculture Prescription under the FPC; then
- a QRP will prepare a rationale for harvesting in the WTRA or WTP including identification of ~~identify~~ one or more replacement WTRAs that provide an area, number of trees or habitat that is at least equivalent⁵ to the portion of the WTRA or WTP from which timber is being harvested and document the rationale, including a ~~and~~ map of the replacement area(s), in a Site Plan or Support Document.
- ¹ For the purposes of this section, 'rendered ineffective' means, in the opinion of a QRP, as documented in a Site Plan or Support Document, damaged to a degree that the WTRA or WTP no longer has attributes consistent with a mature or old seral condition and considering the original intent of the WTRA or WTP (if known).
- ² For the purposes of this section, 'highly susceptible' means a susceptibility hazard class of high or very high as indicated by a field assessment or on MFLNRORD susceptibility mapping and/or as defined within a MFLNRORD Forest Health Strategy and where the timber is within 2 kilometres of a currently infested³ area.
- ³ For the purposes of this section, 'infested' means a live infestation level greater than 30% of the stems per hectare of the stand, as indicated by a field assessment.
- ⁴ For the purposes of this section, 'a potential source to cause epidemic insect spread' means situations where windthrown trees are:
- spruce or Douglas-fir species, which have been down for 3 years or less; and
 - in proximity (~~within 4 km.~~) to a susceptible mature stand, defined as a timber type ~~where~~ that is:
 - within 2 km and where ~~≥20%~~ ≥50% of the stems/ha. or basal area (≥12.5 cm. dbh) is spruce ≥100 years old, in the case of spruce blowdown; or
 - within 1 km and where ~~≥20%~~ ≥50% of the stems/ha. or basal area (≥12.5 cm. dbh) is Douglas-fir ≥80 years old, in the case of Douglas-fir blowdown.

⁵ For the purposes of this section, 'equivalent' means equal to the % that was legally required by a FSP under the FRPA or a Site Plan / Silviculture Prescription under the FPC that applied at the time when the WTRA or WTP was established and having attributes consistent with a mature or old seral condition.

5.3.1.8 **Wildlife and Biodiversity — Coarse Woody Debris

Legal References: FPPR Sec. 68

Information
Coarse woody debris is managed through the practice requirements of FPPR Section 68 (coarse woody debris) and through various GAR orders. The following results and strategies are intended to augment the requirements of FPPR Section 68 but not to reduce the requirements of and general wildlife measures within the GAR orders.

Results and Strategies
<p>The TSM adopts, as a result or strategy related to coarse woody debris, Section 68 (coarse woody debris) of the FPPR and the following additional result and strategy is are specified as requirements that apply to each holder of an agreement under Section 12(2) of the Forest Act entered into by the TSM:</p> <ol style="list-style-type: none"> 1. As a result, during timber harvesting in Biogeoclimatic Zones of IDF and MS¹ retain a minimum of 1.24 m³/ha of coarse woody debris from a minimum of 4 logs per hectare, each being a minimum of 2 metres in length, but between greater than 5 and 10 metres in length if available, in length and with a minimum of 20 centimetres in diameter at one end. 2. As a strategy, to reduce the potential for buildup of Douglas-fir and spruce bark beetles related to coarse woody debris retention, to the extent practicable: <ol style="list-style-type: none"> a. select dead and dry material over green material; b. retain material from species other than Douglas-fir and spruce; and c. leave Douglas-fir and spruce stump heights as low to the ground as possible. <p>¹ The identification of Biogeoclimatic Zones IDF and MS as priority zones to increase CWD retention, as well as information on ecological considerations for coarse woody debris piece size and pieces per hectare are provided in: Chief Forester's Guidance on Coarse Woody Debris Management (May 2010).</p>

5.3.2 Wildlife

5.3.2.1 Grizzly Bear Habitat and Connectivity Corridors

(No change)

5.3.2.2 Caribou

(No change)

5.3.2.3 Objectives Set by Government for Wildlife

(No change)

5.3.2.4 **Species at Risk, Regionally Important Wildlife, Ungulate Winter Range and Wildlife Habitat Areas

Legal References: KBHLPO Objectives 3 and 5, FPPR Sec. 7, GAR Sec. 9 to Sec. 13, and [Kootenay Boundary Wildlife Habitat Features Gar Order M213](#)

Relates to: FSP Sec. 5.3.2.1, Sec. 5.3.2.2, and Sec. 5.3.2.5

Information
<p><i>Notices given under FPPR Section 7(2) specify the amount, distribution and attributes of wildlife habitat required for identified species at risk (SAR), regionally important wildlife and ungulate species. Orders under the GAR Sections 9 to 13 establish WHAs, UWRs, and specify GWMs for specific species. In many cases the newer GAR orders establishing WHAs and GWMs have addressed and replaced the requirements of earlier FPPR Section 7(2) notices.</i></p> <p><i>Section 7(2) Notices and GAR Orders in effect and applicable to the FDUs of this FSP are listed in an appendix of the accompanying FSP Support Document with links to the individual orders and boundary maps. The location of established UWRs and WHAs are shown on the FDU maps of this FSP and/or on the maps accompanying the above orders.</i></p>

Results and Strategies
<ol style="list-style-type: none">1. <i>As a result, the TSM will construct a road or enter into an agreement that authorizes timber harvesting or road construction only where it is consistent with the requirements of the applicable Notices under FPPR Section 7(2) and Orders under the GAR Sections 9 to 13, and with any measures prescribed by a QRP to protect identified wildlife habitat features as defined in the Kootenay Boundary Wildlife Habitat Features Gar Order M213.</i>2. <i>With regard to SAR (including FPPR Section 7(2) species), UWRs, WHAs, and wildlife habitat features, the TSM specifies the following additional strategies:</i><ol style="list-style-type: none">a. <i>at the planning stage for timber harvesting and road construction:</i><ol style="list-style-type: none">i. <i>an overview assessment will be completed by a QRP which identifies, and summarizes in a document, the Notices related to SAR and Orders related to UWRs and WHAs that are relevant to the proposed forest development; and</i>ii. <i>site plans and/or support documents will be prepared by a QRP for each cutblock of a TSL that describe how timber harvesting and road construction will be consistent with the requirements of the Notices and Orders identified above, and with measures to protect any identified wildlife habitat features;</i>b. <i>awareness training for SAR and wildlife habitat features will be conducted for new BCTS field staff within 1 year of the start of employment and for all field staff every five years, documented in a training record, and include information regarding species identification, management strategies and reporting and, where new information regarding SAR becomes available, field staff will receive awareness training regarding the new information within 1 year;</i>

- c. *contractors and agreement holders who conduct activities in the field will be provided with an information package regarding the identification of SAR, **wildlife habitat features**, and notification requirements and, through pre-work meetings, site plans and/or support documents, will be advised of:*
 - i. *the results of any stand level assessments for SAR and **wildlife habitat features**;*
 - ii. *the measures or requirements for any applicable SAR, UWRs, WHAs, **and wildlife habitat features**; and*
 - iii. *how planned primary forest activities will be consistent with the above requirements;*
- d. *where a SAR **or wildlife habitat feature** is identified in relation to planned or active forest development activities, the TSM will follow existing management strategies and measures¹ and undertake at least one of the following options:*
 - i. *include the area in a WTRA, RRZ, or other reserve area; and/or*
 - ii. *refer the area to a QRP for a professional assessment and implement the resulting recommendations;*
- e. *where, in the opinion of a QRP, access control is necessary to manage, protect and/or conserve wildlife habitat values the TSM will, in accordance with the recommendations of the QRP, undertake one or more of the following measures:*
 - i. *install signage to inform and educate the public; and/or*
 - ii. *undertake or require prompt road deactivation or rehabilitation.*

¹ *For the purposes of this section, 'existing management strategies and measures' are those identified in guidance documents such as: the Ministry of Environment 'Accounts and Measures for Managing Identified Wildlife' guides, BCTS 'Species of Management Concern General Guidance', BCTS 'Species Of Management Concern in the Kootenay Business Area' (or successor documents), and existing reports prepared by QPs.*

5.3.2.5 ****Encounters with Wildlife Habitat Features**

Legal References: GAR Sec. 9 to Sec. 13, Kootenay Boundary Wildlife Habitat Features Gar Order M213

Relates to: FSP Sec. 5.3.2.3 and Sec. 5.3.2.4

Results and Strategies

In addition to the results and strategies related to planning, awareness training, and information provided to contractors and agreement holders within FSP Section 5.3.2.4, as strategies to prevent damaging or rendering ineffective a wildlife habitat feature¹, the TSM specifies the following requirements that apply to each holder of an agreement under Section 12(2) of the Forest Act and each holder of a contract to construct, maintain or deactivate a road or conduct silviculture treatments entered into by the TSM:

1. *Where measures to protect a wildlife habitat feature have been specified within a project plan², the holder of an agreement or contract will conduct primary forest activities and other related activities in accordance with the measures specified in the project plan.*

2. Where the holder of an agreement or contract encounters a wildlife habitat feature, not previously identified and accommodated in an existing project plan, the following actions will be taken immediately by the agreement or contract holder:

- a. stop all primary forest activities that could impact the wildlife habitat feature and report the wildlife habitat feature to the project supervisor and the BCTS representative;
- b. determine a course of action, considering existing management strategies, best management practices, professional guidance documents and/or recommendations from a QRP; and
- c. document the decision(s) made with a rationale, implementing the elements from 2b as appropriate, through an updated or amended project plan before proceeding with any primary forest activities in accordance with the updated or amended project plan.

¹ For the purposes of this section, 'wildlife habitat feature' means those features identified within the Kootenay Boundary Wildlife Habitat Features Gar Order M213, as follows:

~~i. From the Kootenay Boundary Wildlife Habitat Features Order:~~

- nest of a Bald Eagle
- nest of an Osprey
- nest of a Flammulated Owl
- nest of a Western Screech-Owl *macfarlanei* subspecies
- nest of a Great Blue Heron
- nest of a Lewis's Woodpecker
- nest of a Williamson's Sapsucker
- American Badger burrow
- Grizzly Bear den
- significant mineral lick
- significant wallow
- bat hibernaculum
- bat nursery roost
- hot spring or thermal spring, ~~and~~

~~ii. Other wildlife habitat features:~~

- ~~Black Bear den~~
- ~~large stick nest~~
- ~~active bird nest~~

² For the purposes of this section, a 'project plan' means a site plan, support document, harvest plan, contract work plan, pre-work report or inspection report.

5.3.3 Fish Habitat in Fisheries Sensitive Watersheds

(No change)

5.4. Water for Consumptive Use

5.4.1 ******Water in Community Watersheds

Legal References: FPPR Sec. 8.2, Sec. 59 to Sec. 63, and Sec. 84

Information
Designated community watersheds within the FDUs of this FSP and in effect at the time of the FSP submission are listed in a table within Appendix 4 and are shown on the FDU Maps.

Where there are community watershed management groups, BCTS will offer to meet to discuss plans and operations that are, or will be, occurring within the watershed. Such meetings will occur annually when operations are ongoing. As an example of this communication forum, BCTS participates on the Mark Creek Watershed Committee within the Rocky Mountain FDU.

Results and Strategies

1. For the objective for water in community watersheds that is set out in Section 8.2 of the FPPR, the TSM adopts, as a result or strategy, Sections 59 to 63 (practice requirements in watersheds) of the FPPR, and the following additional strategies are specified:
2. Prior to constructing a road or entering into an agreement that authorizes timber harvesting or road construction within a community watershed, the TSM will ensure:
 - a. a hydrologic assessment¹, including consideration of cumulative effects², is carried out by a QRP, *unless the area of planned cutblocks and roads within the community watershed is incidental³*;
 - b. the design of planned cutblocks and roads and/or prescribed measures are consistent with the recommendations of the hydrologic assessment; and
 - c. while primary forest activities are being conducted, a Qualified Professional will monitor, including documentation in inspection forms, to ensure that all activities are conducted in accordance with the recommendations of the hydrologic assessment.
3. At the planning and design stage for timber harvesting and road construction, the TSM will provide a referral letter to the water licensee, which includes a description of the planned activities and provides a reasonable opportunity for review and comment.
4. At least 48 hours before the commencement of any road construction or deactivation in a community watershed, the TSM will provide written notification to the water licensee.
5. *As a strategy that applies to the TSM and each agreement holder under this FSP, implement the requirements of the results and strategies within Sections 5.8.1 (Road Maintenance), 5.8.2 (Road Deactivation) and 5.8.3 (Revegetation Following Road Construction and Deactivation) of this FSP.*

¹ For the purposes of this section, a 'hydrologic assessment' is defined as an analysis, conducted by a QRP, of existing and potential forest development related effects on water and water-related resources conducted at the site or watershed level and includes, as determined by the QRP, the following elements, if considered important by the QRP:

- a risk analysis assessing the risk of potential impacts to elements at risk;
- an overview of the watershed including creek morphology;
- a watershed snapshot or report card update (a GIS analysis);
- a review of cumulative effects of past and proposed activities;
- specific recommendations for hazard mitigation; and/or
- a drainage plan for roads and other related development.

² For the purposes of this section, 'cumulative effects' means, in relation to forest hydrology, the effects (e.g., changes to quantity & timing of water flow, water quality, stream channel conditions and sensitivity, redirected runoff, etc.) caused by the combined results of past, current and future forest development by all forest agreement holders, as well as other known *past, current and planned future* activities, within a watershed or development area.

³ For the purposes of this section, 'incidental' means:

- *a circumstance where the majority of a planned forest development is located outside of the boundary of a community watershed but, for planning reasons (e.g., forest health priority,*

strategic/economic development, avoiding isolation of timber, selection of lower impact access, or other planning consideration), a minor portion of the planned (cutblock or road) development extends into the drainage area of the community watershed;

- *the planned total cutblock and road area within the community watershed is less than or equal to 2% of the total watershed area or 5 hectares, whichever is less; and*
- *a Qualified Professional has determined, and documented within a written rationale, that the incidental development is unlikely to result in significant hydrological effects which would negatively impact water quality, quantity, or timing of flow.*

5.4.2 **Consumptive Use Streams

Legal References: KBHLPO Objective 6 and FPPR Sec. 59 & Sec. 60(1)

Relates to: FSP Sec. 5.3.1.5

Results and Strategies

1. *For the objective for consumptive use streams set out in Objective 6 of the KBHLPO, as a result or strategy, the TSM will comply with Objective 6 and, as additional strategies, at the planning and design stage for timber harvesting and road construction the TSM will:*
 - a. *provide a referral letter to licensed domestic water users¹, or their designated group representative, which includes a description of the planned activities and provides a reasonable opportunity for review and comment (as defined in Section 2.2);*
 - b. *as documented in a Site Plan or Support Document, for each stream where the streamside management zone of Objective 6 applies:*
 - i. *ensure specific measures are prescribed by a QRP to safeguard water licenced for human consumption; and*
 - ii. *plan and design timber harvesting in accordance with Section 5.3.1.5 of this FSP.*
2. *As a strategy that applies to the TSM and each agreement holder under this FSP, implement the requirements of the results and strategies within Sections 5.8.1 (Road Maintenance), 5.8.2 (Road Deactivation) and 5.8.3 (Revegetation Following Road Construction and Deactivation) of this FSP. ~~exposed soils on cut and fill slopes along new roads will be grass seeded and exposed soils on new landings and rehabilitated areas will be grass seeded and/or planted with trees. Exposed soils are to be grass seeded concurrent with, or during the first spring or fall after the completion of, road construction or rehabilitation activities and no later than 12 months following mineral soil exposure. Grass seeding will utilize high quality seed (a mix recommended by a MFLNRORD range specialist, if available; otherwise Canada Common #1 Forage mix or better grade) to ensure that the introduction of invasive plant seed is minimized.~~*
3. *Sections 59 and 60(1) of the FPPR are a result or strategy that applies to the TSM and each agreement holder under this FSP.*

¹ *For the purposes of this section, 'licensed domestic water users' are those listed on the B.C. Government Water Licences Query (or successor) website as holding a licence for domestic use and where the licenced intake is being utilized.*

5.5. **Visual Quality - Scenic Areas and Visual Quality Objectives

Legal References: FPPR Sec. 9.2, KBHLPO Objective 9, GAR Sec. 7(1) and Sec. 7(2)

Information		
<p>The objective set by government for visual quality in FPPR Section 9.2 establishes default objectives for visual quality in Scenic Areas where Visual Quality Objectives (VQOs) have not otherwise been legally established. Because VQOs have been legally established within all of the FDUs of this FSP, FPPR Section 9.2 does not apply.</p> <p>With regard to KBHLPO Objective 9, where Scenic Areas or VQOs are established by Section 7 GAR Orders or other legal orders, these cancel and replace those established previously by the KBHLPO. Therefore, Objective 9 of the KBHLPO also does not apply.</p> <p>Table 1 below identifies the orders that legally establish Scenic Areas and VQOs for the FDUs within this FSP, and which are in effect on the date of submission of this FSP:</p>		
Table 1 - Established Scenic Areas and VQOs		
FDU	Scenic Areas Established by:	VQOs Established by:
Boundary	GAR Sec. 7(1) Order by Regional Director, ILMB, Dec. 23, 2005, effective Dec. 30, 2005	GAR Sec. 7(2) Order by the District Manager, Arrow Boundary Forest District, Dec. 31, 2005
Arrow	GAR Sec. 7(1) Order by District Manager, Arrow Boundary Forest District, Dec. 31, 2005	GAR Sec. 7(2) Order by the District Manager, Arrow Boundary Forest District, Dec. 31, 2005
Kootenay Lake	Ministerial Order approving the KBHLPO Oct. 26, 2002; Grand parented under FRPA Sec. 180(c)	GAR Sec. 7(2) Order by the District Manager, Kootenay Lake Forest District, Mar. 7, 2014
Rocky Mountain	Ministerial Order approving the KBHLPO Oct. 26, 2002; Grand parented under FRPA Sec. 180(c)	Established by letter from the District Manager, Rocky Mountain District, Mar. 14, 2003; Grand parented under FRPA Sec. 181
<p>The accompanying FDU maps show the location of Scenic Areas and corresponding VQOs applicable to the FDUs in this FSP.</p>		

Results and Strategies
<p>For the objectives for visual quality that are established through the applicable Section 7(2) GAR Orders and the District Manager's letter, as listed in Table 1, the TSM specifies the following result (#1) and strategies (#2 to #4):</p> <ol style="list-style-type: none"> 1. As a result, where the TSM constructs a road or enters into an agreement that authorizes timber harvesting or road construction, the completed road construction and/or timber harvesting will achieve the VQO established for the area. 2. At the planning stage for road construction and timber harvesting, the TSM will complete a Visual Impact Assessment which assesses whether the proposed activities will achieve established VQOs, using the categories of visually altered forest landscape as defined in FPPR Section 1.1, by:

- a. *assessing the proposed visual alteration from one or more significant public viewpoints, located on water or land, that provides a viewing opportunity and has relevance to the **visual** landscape **or** **landform** being assessed; and*
 - b. *utilizing the guidance for predicting VQOs in:*
 - i. *Tables 3 and 4 of the FPC Visual Impact Assessment Guidebook, Second edition, January 2001; and/or*
 - ii. *the Protocol for Visual Quality Effectiveness Evaluation Procedures and Standards, FREP, 2008; and*
- estimating the likely resulting VQO using the descriptive categories of visually altered forest landscape as defined in FPPR Section 1.1.*
- 3. *Where road construction and/or timber harvesting is planned and it is not practicable to achieve the established VQO, given the circumstances or conditions of a particular area, prior to constructing a road or entering into an agreement that authorizes timber harvesting or road construction, the TSM will **prepare a written rationale that describes how the road construction and/or timber harvesting will be consistent with the established VQO to the extent practicable and apply for obtain the DDM's approval of:***
 - ~~a) an exemption from the requirement under Section 12(7) of the FPPR; **or**~~
 - a. site-specific alternate or modified results and/or strategies consistent with Section 25.1 of the FPPR.**
- 4. *In addition to the above strategies, within the Rocky Mountain FDU, the TSM will comply with the requirements and conditions of the District Manager's letter of March 14, 2003 establishing VQOs, including application to the District Manager for written approval to vary from an established VQO in all circumstances.*

5.6. Cultural Heritage Resources

(No change)

5.7. Recreation Resources

(No change)

5.8. Forest Roads

5.8.1 Road Maintenance

(No change)

5.8.2 **Road Deactivation

Legal References: FPPR Sec. 82

Relates to: FSP Sec. 5.8.1 and 5.8.3

Results and Strategies

The TSM adopts, as a result or strategy related to Forest Roads, Section 82 (road deactivation) of the FPPR and the following additional strategy is specified as a requirement that applies to each holder of an agreement under Section 12(2) of the Forest Act entered into by the TSM:

- 1. Unless otherwise exempted in writing by the TSM, each agreement holder shall carry out road deactivation¹ during the term of the agreement and ensure the following:*
 - a. a Road Deactivation Plan² shall be prepared by a QRP;*
 - b. road deactivation works shall be supervised by a Qualified Professional;*
 - c. a Statement of Road Deactivation Conformance shall be signed by a QRP which certifies that:*
 - i. the road deactivation work has been carried out in general conformance with the Road Deactivation Plan, and any road deactivation prescriptions, design amendments or other relevant documents if applicable;*
 - ii. sufficient field reviews of the work at the project site(s) have been carried out at appropriate times during the deactivation work; and*
 - iii. significant revisions to any prescriptions and supporting documents prepared for the road deactivation project, including all prescription amendments, have been documented and recorded on a set of drawings (maps) marked “as-built” and, where necessary, described in supporting documents;*
 - d. if requested by the TSM, a copy of the signed Statement of Road Deactivation Conformance shall be provided to the TSM within 30 days following the completion of road deactivation.*

¹ *For the purposes of this section, ‘road deactivation’ means permanent, self-maintaining deactivation of a road carried out to mitigate stability and erosion hazards, in order to prevent material adverse effects to FRPA values, for roads no longer required for industrial use. Road deactivation includes stabilizing the road prism, removing drainage structures, and measures to limit erosion. Other measures on roads that are to be retained are considered maintenance.³*

² *For the purposes of this section, a ‘Road Deactivation Plan’ means a professional document which provides road standards, design specifications, measures, and other information, as applicable, to facilitate understanding of the works to be carried out by personnel who supervise or carry out road deactivation.³*

As determined applicable by a QRP, a Road Deactivation Plan will consist of measures prescribed, a map showing the locations of the measures prescribed, site conditions that may be a concern for worker safety, identification of special concerns that affect the timing or conduct of the work, recommendations for equipment or special work procedures necessary, input from specialists, and/or where field reviews should be carried out during or following the work.³

³ *Adapted from: [Professional Engineers and Geoscientists of BC and Association of BC Forest Professionals. 2012. Guidelines for Professional Services in the Forest Sector – Forest Roads. Guidance related to forest road deactivation is available within this reference, as well as within the \[MFLNRORDRD Engineering Manual\]\(#\).](#)*

5.8.3 **Revegetation following Road Construction and Deactivation

Legal References: FPPR Sec. 40

Relates to: FSP Sec. 6.1

Results and Strategies
<p><i>The TSM adopts, as a result or strategy related to Forest Roads, Section 40 (revegetation) of the FPPR and the following additional strategy is specified as a requirement that applies to each holder of an agreement under Section 12(2) of the Forest Act entered into by the TSM:</i></p> <p>1. <i>Unless otherwise exempted in writing by the TSM, each agreement holder shall carry out revegetation and ensure the following:</i></p> <p>a. <i>upon completion of road construction or and deactivation/rehabilitation activities, exposed mineral soils on:</i></p> <p>i. <i>cut and fill slopes along new roads;</i></p> <p>ii. <i>landings; and</i></p> <p>iii. <i>deactivated / rehabilitated roads areas;</i></p> <p><i>will be grass seeded concurrent with, or during the first spring or fall after the completion of, road construction or and deactivation/rehabilitation activities and no later than 12 months following mineral soil exposure, except if the exposed mineral soils are: 1) within an area that will be revegetated through the planting of trees, and 2) not a high hazard for soil erosion (as determined from a hazard assessment key).</i></p> <p>b. <i>if utilizing a dry grass seeding method, seed shall be applied at a rate of 30 to 50 kilograms per hectare; and</i></p> <p>c. <i>grass seeding will utilize high quality seed (a mix recommended by a MFLNRORD range specialist, if available; otherwise Canada Common #1 Forage mix or better grade) to ensure that the introduction of invasive plant seed is minimized and obtain a Certificate of Analysis, providing a copy to the TSM upon request, to confirm that invasive plant seeds are not present in the seed mixes being utilized.</i></p>

6. MEASURES IN RELATION TO INVASIVE PLANTS AND NATURAL RANGE BARRIERS

6.1. **Measures to Prevent the Introduction or Spread of Invasive Plants

Legal References: FRPA Sec. 47 and FPPR Sec. 17

Relates to: FSP Sec. 5.8.3

Measures
<p><i>For the purposes of FRPA Sec. 47 and FPPR Sec. 17, the TSM specifies the following measures to prevent the introduction or spread of invasive plants:</i></p>

1. *Through a landscape level assessment or at the site plan stage, the TSM will refer to the MFLNRORD Invasive Alien Plant Program (IAPP) and Invasives BC databases to identify the locations of known invasive plant infestations. Where invasive plant infestations are found to be located within or adjacent to areas proposed for timber harvesting and road building activities site-specific measures to minimize the establishment and/or spread of invasive plants will be incorporated into site plans and tenure agreements.*
2. *The TSM will ensure that:*
 - a. *invasive plant awareness training, developed by a qualified professional, is conducted for new BCTS field staff within 1 year of the start of employment and for all field staff a maximum of every five years, is documented in a training record, and includes information regarding species identification, monitoring programs, reporting methods and implementation of control measures;*
 - b. *invasive plant awareness training is mandatory for all staff and contract personnel carrying out layout and development activities and/or monitoring the performance of contractors or agreement holders engaged in primary forest activities;*
 - c. *outside of known infestation areas, field staff and other key personnel carrying-out activities in the field enter newly identified invasive plant infestations into the MFNRO report-a-weed reporting system within 30 days of discovery; and*
 - d. *contractors engaged in road building activities and agreement holders are provided with an information package regarding the identification and reporting of invasive plants. Where applicable based on Measure #1 above, measures to minimize the establishment and spread of invasive plants are requirements within contracts and agreements. Contract / agreement requirements related to invasive plants are reviewed at pre-work meetings and monitored for conformance.*
3. *Based on the review described in Measure #1 above, or where invasive plant infestations are identified as described in 2c, where the TSM constructs a road or enters into an agreement that authorizes timber harvesting or road construction the following measures will be utilized and are a requirement that applies to each holder of an agreement under Section 12(2) of the Forest Act and each holder of a contract to construct a road or conduct silviculture mechanical site preparation entered into by the TSM:*
 - a. *vehicles, mechanized equipment, culverts, bridges and cattle-guards are to be inspected for the presence of soil or plant material, including documentation on inspection forms, prior to being transported to or from work sites and, if present, plant and soil materials are to be removed;*
 - b. *to reduce the available seedbed for invasive plants, grass seed exposed mineral soils on:*
 - i. *cut and fill slopes of new roads;*
 - ii. *new trails and landings; and*

<p>iii. <i>deactivated / rehabilitated areas;</i> <i>during the first available spring or fall and not more than 12 months following construction mineral soil exposure, except if the exposed mineral soils are: 1) within an area that will be revegetated through the planting of trees, and 2) not a high hazard for soil erosion (as determined from a hazard assessment key);</i></p> <p>ii. <i>grass seed exposed soils on all new landings and rehabilitated areas during the first available spring or fall and not more than 12 months following the time of mineral soil exposure, except if the rehabilitated areas are to be revegetated through the planting of trees; and</i></p> <p>c. <i>if utilizing a dry grass seeding method, seed shall be applied at a rate of 30 to 50 kilograms per hectare; and</i></p> <p>d. <i>where grass seeding is undertaken, utilize high quality seed (a mix recommended by a MFLNRORD range specialist, if available; otherwise Canada Common #1 Forage mix or better grade) to ensure that the introduction of invasive plant seed is minimized and obtain a Certificate of Analysis, providing a copy to the TSM upon request, to confirm that invasive plant seeds are not present in the seed mixes being utilized.</i></p> <p>4. <i>Invasive plant infestations located in cut-blocks will be recorded in Site Plans or Support Documents and monitored and reported-on during post-harvest surveys. Personnel conducting post-harvest surveys will be required to identify and report new invasive plant infestations observed during surveys.</i></p> <p>5. <i>In addition to the above strategies, within the Rocky Mountain FDU where timber harvesting is proposed for the purposes of ecosystem restoration the TSM will require operations to take place during a period of time when soils are sufficiently frozen and/or a snow pack is present to prevent rutting/forest floor scalping to reduce potential soil disturbance and spread of invasive plants. Harvesting will be allowed at other times where a qualified professional has specified a maximum level of soil disturbance permitted considering site factors (including soil and subsoil conditions, slopes and topography, site moisture, seasonal conditions, harvesting method and timing), as documented in a Site Plan or Support Document, and where other mitigation measures will be carried out to control the spread of invasive species.</i></p>

6.2. **Measures to Mitigate the Loss of Natural Range Barriers

Legal References: FRPA Sec. 48 and Sec. 51, FPPR Sec. 18

Measures
<p><i>For the purposes of FRPA Sec. 48 and FPPR Sec. 18 (natural range barriers), the TSM specifies the following measures to mitigate the effect of removing or rendering ineffective natural range barriers¹:</i></p> <p>1. <i>When the TSM plans or designs timber harvesting or road building within or adjacent to the area of a range agreement the TSM will plan, as documented in a Site Plan or Support Document, and conduct primary forest activities in a manner that will minimize impacts</i></p>

to natural range barriers, to the extent practicable and considering the impacts to other FRPA values.

2. At the planning and design stage of timber harvesting or road building, the TSM will provide a referral to the Natural Resource District Range Officer and ~~make a reasonable effort² to inform~~ to the holder of a range agreement, **making a reasonable effort² to:**
 - a. inform the holder of the range agreement of the details of the planned forest development, including the location of proposed cutblocks and roads **and potential impacts³ on natural range barriers, if applicable and if known;**
 - b. **request information regarding natural range barriers utilized by the holder; and**
 - c. provide a reasonable opportunity **to the holder** for review and comment.
3. If the holder of the range agreement indicates in writing (within the time frame specified by the TSM) that a proposed cutblock or road will remove or render ineffective a natural range barrier for livestock that are authorized to be on an area:
 - a. the TSM will consult with the holder of the range agreement on:
 - i. the location of natural range barriers and potential impacts,
 - ii. preferred mitigation actions, and
 - iii. the timing of post-operations follow-up and mitigation actions.
 - b. where there is agreement on mitigative measures, the TSM will ensure those measures are incorporated within the requirements of any agreement entered into under Section 12(2) of the Forest Act or any road construction contract issued by the TSM, or the TSM will carry out the measures within one year following the expiry of the agreement under Section 12(2) of the Forest Act or the road construction contract, or within another time period if agreed to with the holder of the range agreement; and
 - c. where mitigative measures include the installation of a range development, any ongoing maintenance of the development, if required, will be the responsibility of the holder of the range agreement, as authorized by the District Manager.
4. Where the TSM becomes aware that a proposed cutblock or road will remove or render ineffective a natural range barrier for livestock that are authorized to be on an area, but the holder of the range agreement does not respond to notification by the TSM or the TSM is unable to come to an agreement with the holder of the range agreement on measures to mitigate the negative effects, the TSM will consult with the District Range Officer and plan such measures as the TSM deems reasonable. The TSM will notify the holder of the range tenure in writing at least 30 days prior undertaking the measures.

¹ For the purposes of this section, a 'natural range barrier' is defined as a stand of trees or topographic feature that stops or impedes livestock movement to or from an adjacent area.

² For the purposes of this section, a 'reasonable effort' is defined as a documented written notice sent to the contact address, identified from the relevant MFLNRO~~RD~~ database, of a range tenure holder, ~~indicating the proposed forest development,~~ **including the information in 2a and 2b above and** the website address where a map of the proposed development may be accessed, and providing a 'reasonable opportunity for review and comment' (as defined in **FSP** Section 2.2).

³ For the purposes of this section, 'potential impacts' include increased cattle access to other range agreement areas, riparian areas, winter ungulate ranges, alpine habitats, parks and protected areas, recreation areas, plantations and private land.

7. STOCKING STANDARDS

7.1. Free Growing Stand Assessment and Stocking Standards

(No change)

8. APPENDICES

APPENDIX 1 - FDU Maps

(No change)

APPENDIX 2 - Timber Sale Licences and Road Permits in Effect

(No change)

APPENDIX 3 - Attributes of High-Value Wildlife Tree Retention Strategies

(No change)

APPENDIX 4 - **Designated Community Watersheds in Effect

(Typographical errors corrected to remove duplicate Community Watershed names.)

APPENDIX 5 - Stocking Standards

(No change)

APPENDIX 6 - **Amendments to the FSP in Effect

Copies of approved Amendments #1 to #4 added.